

AMENDMENTS TO THE DRAWINGS

The attached Replacement Sheet of Drawings includes changes to Fig. 1 and replaces the original sheet including Fig. 1.

The changes made to Fig. 1 are as follows: indicator numbers 22, 24 and 26 have been added to accord with changes made in the text of the specification. The changes are indicated in the attached annotated sheet showing changes.

Attachments: Replacement sheet
Annotated sheet showing changes

REMARKS

This application contains claims 1-48. Claims 2, 3, 15, 16, 23, 24, 31, 32, 45 and 46 have been canceled without prejudice. Claims 1, 4-6, 12, 13, 19, 20, 22, 25, 26, 30, 34, 35, 38, 39, 42, 43, 47 and 48 are hereby amended. No new matter has been introduced. Reconsideration is respectfully requested.

Claims 1-21 were rejected under 35 U.S.C. 101 for being directed to non-statutory subject matter. In response to this rejection, Applicant has amended claim 1 to clarify that the method recited in the claim is carried out by numerical calculation, using a computer. In view of this amendment, claims 1-21 are believed to meet the requirements of 35 U.S.C. 101.

Claims 1-48 were rejected under 35 U.S.C. 112, second paragraph, for indefiniteness.

Specifically, claims 22-34 were rejected for being directed to a single component, which does not have a generally-accepted definition. In response to this rejection, Applicant has amended claim 22 to recite an additional component of the apparatus: an input interface. The existence of such an interface is implicit in the language of the first paragraph on page 12 of the present patent application as filed. Applicant proposes to amend Fig. 1 to indicate the input interface and other components, and to amend the first and second paragraphs on page 12 to recite these components explicitly. In view of these amendments to claim 22 and to the drawing and specification, Applicant believes that the rejection of claims 22-34 is overcome.

These and other claims (not all specifically enumerated in the Official Action) were rejected for language that the Examiner considered to be vague and indefinite. In response to this rejection, Applicant has amended claim 1 to incorporate the limitations of claims 2, 3, 15 and 16, as well as additional limitations from

the specification. In particular, the claim now recites determining a trend of a stochastic process. As noted in the specification (page 3, lines 12-31, and page 12, lines 16-18), techniques for determining such trends are known in the art and are described, for example, in the book by Hull cited in the Background of the Invention. The step of "making a trading decision" has been replaced by a step of "computing at least one of an expected value... and an expected yield... as a basis for making a trading decision," since the claimed invention is directed at providing decision-making tools, rather than actually making the decision (page 5, lines 20-23 in the specification). Independent claims 22 and 35 have been amended in like manner to claim 1.

Dependent claims 5, 12, 13 and 20 have been amended to incorporate limitations from the specification. The basis for these limitations is as follows:

Claim 5	Page 13, lines 25-28
Claim 12	Page 3, lines 18-25
Claim 13	Page 14, lines 10-20
Claim 20	Page 6, lines 21-26

The corresponding apparatus and software product claims have been similarly amended. Other claims have been amended for correct dependence and/or to correct typographical errors.

In view of the above-mentioned amendments, all the claims now pending in this application are believed to meet the requirements of 35 U.S.C. 112.

Claims 1-4, 22-26 and 35-39 were rejected under 35 U.S.C. 103(a) over Tucker et al. ("The Probability Distribution of Foreign Exchange Price Changes"). Applicant respectfully traverses this rejection. Tucker neither teaches nor suggests the step of "recalculating the density function," as recited in the claims as filed.

In any case, even if it were conceded that Tucker discloses this step, he makes no suggestion of the additional limitations that have now been amended into the independent claims. Therefore, all the claims in this application are believed to be patentable over the cited art.

The Examiner imposed a number of requirements under 37 CFR 1.105. Applicant's responses to these requirements are detailed below:

1) None of the inventors has authored or co-authored any publication that describes the disclosed subject matter of claims 1-20, other than the present patent application.

2) In addition to the book by Hull cited in the specification, the inventors also made use of the following books:

- Wilmott et al., *The Mathematics of Financial Derivatives: A Student Introduction* (Cambridge University Press, 1995).
- Feller, *An Introduction to Probability Theory and Its Applications* (Wiley International Edition, 1968).

Copies of these textbooks have been submitted with a supplemental Information Disclosure Statement in this case. These books provided information on the basic concepts of financial derivatives and mathematic tools for use in modeling such derivatives. There is no suggestion in either book of the novel techniques taught by the present patent application. In particular, none of the prior art teaches or suggests a method for trading in a financial derivative that includes steps of recalculating a density function by integrating a random variable representative of a stochastic process that is predictive of a future value of an asset over the density function at a first time to find the probability distribution of the value at a second time, and

computing at least one of an expected value of the asset and an expected yield of the financial derivative based on the recalculated density function as a basis for making a trading decision with regard to the derivative of the asset.

3) Applicant is unable to provide software for practicing the claimed invention. It is believed that the specification as filed meets all the requirements of 35 U.S.C. 112 in terms of enablement and disclosure of the best mode of practicing the invention. Software implementing the present invention was prepared for internal feasibility testing only, and does not comply with the policy requirements of the assignee (IBM Corp.) for release outside the company. If the Examiner feels that a demonstration of the invention is necessary, a personal presentation of the software can be arranged.

Applicant believes the amendments and remarks presented hereinabove to be fully responsive to all of the grounds of rejection raised by the Examiner. In view of these amendments and remarks, Applicant respectfully submits that all of the claims in the present application are in order for allowance. Notice to this effect is hereby requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "S. Peter Ludwig", written over a horizontal line.

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